

History of the partnership between the Basic Bioscience Division of DOE and the Life Sciences Research Foundation.

Scientists founded the Life Sciences Research Foundation (LSRF) in 1983 as a non-profit pass through foundation that awards post doctoral fellowships in all areas of the life sciences. LSRF scientists review hundreds of applications each year from PhDs seeking support. For example this year, our 26th, we received 800 applications and our peer review committee will choose about 50 finalists who are eligible for these awards. We have no endowment so we solicit sponsors each year. The fellowships are sponsored by research oriented companies, foundations, philanthropists, the Howard Hughes Medical Institute, and other organizations who believe in the value of awarding fellowships to the best and the brightest young scientists. Our web site has a complete listing of all details about LSRF (<http://www.lsrf.org/>). In the late 1980s the Division of Bioscience in the Office of Basic Energy Science, a granting agency of the Department of Energy, joined this partnership. Bioscience's mandate was to support non-medical microbiology and plant sciences. LSRF received a series of 5 year grants from DOE to award fellowships to our top applicants in these fields of research. We began to support DOE-Energy Bioscience post doctoral fellows in 1989. From 1989 through 2004 when DOE funding ended our partnership awarded 41 DOE-Energy Bioscience Fellows of the Life Sciences Research Foundation. Each of these was a three year fellowship.

DOE-Energy Biosciences was well matched with LSRF. Our extensive peer review screened applicants in all areas of the life sciences. Most LSRF sponsors are interested in supporting fellows who work on diseases. At the time that we began our partnership with DOE we had no sponsors willing to support plant biology and non medical microbiology. For 15 years DOE played a major role in the training of the very best young scientists in these important fields of research simply through its support of LSRF post doctoral fellows. Young scientists interested in plant biology knew to apply to LSRF for a chance to receive a post doctoral award. We are enclosing a list of the 41 fellows who were supported through this partnership. The list includes some of the most distinguished plant biologists in the country, and our training partnership has had a profound impact on the field of plant biology.

Currently the cost to support a fellow is \$51,000 per year for three years (total of \$153,000). LSRF keeps \$1000 per year per fellow for our expenses. The remainder is passed on to the fellow by way of the fellow's institution. The host institution cannot take any overhead from these awards. Therefore the overhead to support an LSRF fellow is 2%.

1989

Dr. James U. Bowie
Professor, Molecular Biology Institute
University of California, Los Angeles
611 Charles E. Young Dr. E
Los Angeles, CA 90095-1570
Allosteric Regulation in Glutamine Synthetase

1990

Dr. Barbara Kunkel
Associate Professor, Department of Biology
Washington University
1 Brookings Drive, Box 2237
St. Louis, MO 63130
Recognition and signal transduction during pathogenesis of *Arabidopsis thaliana* by
Pseudomonas syringae pv. *maculicola*

1991

Dr. Douglas Cook
Professor, Department of Plant Pathology
University of California
One Shields Avenue
Davis, CA 95616
Molecular and genetic analysis of promoter function in the maize suppressor-mutator
transposable element: the effect of DNA methylation and element-encoded proteins.

1991

Dr. Zhongchi Liu
Associate Professor, Dept. of Cell Biology and Molecular Genetics
3236 H.J. Patterson Hall
University of Maryland
College Park, MD 20742
Molecular genetic studies of *apetala2*, a homeotic gene that regulates flower organ formation and
differentiation in *Arabidopsis thaliana*

1991

Dr. Jason W. Reed
Associate Professor, Department of Biology
University of North Carolina
104 Coker Hall, CB#3280
Chapel Hill, NC 27599-3280
A genetic and molecular approach to unraveling the mechanism of red light signal transduction
in *Arabidopsis thaliana*

1992

Dr. Scott Ensign
Associate Professor, Dept. of Chemistry and Biochemistry
Utah State University
Logan, UT 84322-0300
Biochemical characterization of anaerobic methane and methanol oxidation in photosynthetic
bacteria

1992

Dr. Erica Pascal
California Western School of Law
225 Cedar Street
San Diego, CA 92101
Characterization of the Squash Leaf Cul Virus movement proteins, BR1 and BL1

1993

Dr. Paul Blount
UT Southwestern Medical Center
Department of Physiology
5323 Harry Hines Blvd., L4.134
Dallas, TX 75390-9040
Mechano-sensitive channels: A Molecular study in *Escherichia coli*

1993

Dr. David Lerner
President, Biotechnology Calendar, Inc.
12036 Nevada City Hwy., PMB#209
Grass Valley, CA 95945
Isolation and analysis of floral homeotic genes in maize

1994

Dr. Hank Bass
Assistant Professor, Dept. of Biological Science
Biology Unit I, Chieftan Way
Florida State University
Tallahassee, FL 32303-4370
3-D molecular cytology of meiotic chromosomes

1994

Dr. Krishna K. Niyogi
Assistant Professor, Dept. of Plant & Microbial Biology
111 Koshland Hall
University of California
Berkeley, CA 94720-3102
Genetic analysis of the xanthophyll cycle and photoprotection in *Chlamydomonas reinhardtii*

1994

Dr. David S. Weiss
Department of Microbiology
University of Iowa
3-372 Bowen Science Building
Iowa City, IA 52242-1109
Genetic analysis and subcellular localization of the *Escherichia coli* cell division protein FtsI

1995

Dr. S.P. Dinesh Kumar
Assistant Professor, Department of MCDB
Yale University
910 KBT, P.O. Box 208103
New Haven, CT 06520-8103
Genetic Approach to Dissect N Gene Mediated Signal

1995

Dr. Andrew Millar Reader
Department of Biological Sciences
University of Warwick, Gibbett Hill Road
Coventry CV4 7AL, United Kingdom
Signal Transduction from the Circadian Clock in Arabidopsis

1996

Dr. Jacqueline Heard
Senior Scientist, Mendel Biotechnology
21375 Cabot Blvd.
Hayward, CA 94545
Signal transduction during Arabidopsis/pathogen interaction

1996

Dr. Andrew P. Klok
Perlegen Sciences, Inc.
2001 Stierlin Court
Mountain View, CA 94043
Genetic Analysis of Arabidopsis-Pseudomonas

1996

Dr. Jennifer Kuzma
University of Minnesota
254 Humphrey Center
301 19th Avenue South
Minneapolis, MN 55455
Photoregulation of Gene Expression by Calcium and cGMP

1996

Dr. Ramin Yadegari
Assistant Professor, Dept. of Plant Sciences
University of Arizona
303 Forbes Building
Tucson, AZ 85721-0036
Genetics of Fertilization-Independent Endosperm Development

1997

Dr. Karen Century
Senior Scientist, Mendel Biotechnology
21375 Cabot Boulevard
Hayward, CA 94545
Molecular genetic characterization of developmentally controlled plant disease resistance

1997

Dr. Jay Gulledge
Assistant Professor, Department of Biology
University of Louisville
139 Life Sciences Building
Louisville, KY 40292
Microbiology of Atmospheric CH₄ Oxidation in Soil

1997

Dr. Allen Sessions
Applied Trait Genetics Group
Syngenta Biotechnology Inc
3054 Cornwallis Road
Research Triangle Park, NC 27709
Investigation of cell-cell communication in Arabidopsis floral meristems.

1998

Dr. Joann Conner
Coastal Plain Experimental Station
University of Georgia
2356 Rainwater Rd., P.O. Box 748
Tifton, GA 31794
The isolation and characterization of Leunig, a regulator of Arabidopsis floral organ identity and organ

1998

Dr. Kenneth Keiler
Stanford University, School of Medicine
B351 Beckman Center
Stanford, CA 94305-5329
Control of the G1-to-S phase transition in Caulobacter

1998

Dr. Elizabeth Rogers
Assistant Professor, Department of Biochemistry
371D Bond Life Sciences Center
University of Missouri
Columbia, MO 65211
Structure-Function Studies of IRT1, Member of the ZIP Family of Metal Transport Proteins

1999

Dr. David Mackey
Assistant Professor, Department of Horticulture and Crop Science
306C Kottman Hall, 2021 Coffey Road
Columbus, OH 43210
Molecular Mechanism of Recognition of and Response to avr Proteins by an RPM1-Complex

1999

Dr. Erik W. Vollbrecht
Assistant Professor, Dept. of Genetics, Development and Cell Biology
Iowa State University
2206 Molecular Biology Building
Ames, IA, 50011
Regulation of meristem determinacy by ramosal gene in maize

1999

Dr. Gregory York
University of Michigan Law School
Home address: 3062 Huntington Road
Shaker Heights, OH 44120
Role of the PhaP Protein in Polyhydroxyalkanoate Synthesis

2000

Dr. Christina Bowers
1952 Norfolk
Houston TX 77098
Translational control of secreted proteins in Escherichia coli: Characterization of a novel regulatory pathway

2000

Dr. Seth Jon Davis, Group Leader
Max Planck Institute
for Plant Breeding Research
Carl-Von-Linne-Weg 10
Koeln D-50829 GERMANY
Circadian Gating of light responsiveness in Arabidopsis thaliana

2000

Dr. Elizabeth Haswell
Assistant Professor, Dept. of Biology, Box 1137
Washington University in St. Louis
One Brookings Drive
St. Louis, MO 63130
Function of CLAVATA3, a regulator of Meristem Development in Arabidopsis thaliana

2001

Dr. Franklin Harmon
Principal Investigator, Plant Gene Expression Center
800 Buchanan Street
Albany, CA 94710
Analysis of the Arabidopsis circadian clock gene TOC1 as a putative response regulator

2001

Dr. Christine Pfund
Asst. Researcher, Wisconsin Center For Education Research
Russell Laboratories
1630 Linden Dr
Madison WI 53706
Determinants of gene-for-gene resistance in Arabidopsis thaliana

2001

Dr. Xuelin Wu

Assistant Professor, Molecular and Computational Biology, MCB304B

University of Southern California

MC-2910 UPC

Los Angeles, CA 90089-2910

Characterization of LEAFY movement in *Arabidopsis* floral meristem

2002

Dr. Pablo D. Jenik

Visiting Assistant Professor, Department of Biology

PO Box 3003

Franklin and Marshall College

Lancaster, PA 17604-3003

Analysis of mutants that affect the placement of the embryonic axes in *Arabidopsis thaliana*

1992

Dr. Cynthia A. Lincoln

USDA Plant Gene Expression Center

800 Buchanan Street

Albany, CA 94710

Characterization of a Knotted-1 homologue in *Arabidopsis*

1993

Dr. Peter S. Margolis

Department of Biological Sciences

Stanford University

Stanford, CA 94305-5020

Identification of regulators of developmental gene expression in the filamentous fungus

Neurospora crassa

1994

Dr. Jian-Kang Zhu

Laboratory of Plant Molecular Biology

The Rockefeller University Box 162

1230 York Avenue

New York, NY 10021-6399

Genetic and molecular dissection of a cGMP signal transduction pathway involved in plant response to light

1997

Dr. Kristin D. LeVier

Pfizer Global Research and Development

2800 Plymouth Road

Ann Arbor, MI 48105

Analysis of the *Rhizobium meliloti* BacA protein: Implications for host-microbe interactions

2002

Dr. Jeffrey L. Moseley
Department of Plant Biology
Carnegie Institute of Washington
260 Panama Street
Stanford, CA 94305

Molecular and Biochemical analysis of cellular responses to phosphorus deficiency in a photosynthetic eukaryote

2003

Dr. Simon Chan
Assistant Professor, Section of Plant Biology
University of California - Davis
1 Shields Avenue
Davis, CA 95616
Targeting of de novo DNA methylation in Arabidopsis

2004

Dr. Naoyuki Uchida
Section of Plant Biology
Division of Biological Science, 2231 LSA
University of California, Davis
1 Shields Avenue
Davis, CA 95616
Genetic and biochemical analysis of the mechanism of the long-distance movement of mRNAs in plants